

## ABSTRACT

In a multi-user detection system in which interfering signals are purposely allowed to exist, a parameter estimation unit is provided which utilizes signal processing for determining the channel transfer function for each received signal, including the received power, phase of the oscillator, timing offset relative to the base station clock carrier frequency offset, and number of multipaths replicas and delays for each replica, with the system providing realtime uninterrupted estimates of these parameters required by the signal separation unit.

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